

CLAIMS

What is claimed is:

1. A device for light treatment at a body structure, comprising:

- 5 (a) a container, wherein said container comprises a light source capable of delivering a light beam, wherein said light beam provides said light treatment;
 - (b) a filament optically connected to said light source and stored in said container, wherein said filament is a strand or fiber of a material transparent to said light beam, and wherein a portion of said filament can be pulled out from said container; and
 - 10 (c) a means to turn on said light source after which said light beam radiates through said pulled out portion of said filament at said body structure.
2. The device as set forth in claim 1, wherein said filament is a removable, a disposable, a reusable or a replaceable filament.
- 15 3. The device as set forth in claim 1, wherein said filament is thin enough and flexible enough to allow moving said filament in between teeth.
4. The device as set forth in claim 1, wherein said light source is a low power laser,
- 20 a light emitting diode or a semiconductor laser.

5. The device as set forth in claim 1, further comprising a cutting means to cut said pulled out portion of said filament.
6. The device as set forth in claim 1, further comprising a retracting means to retract said pulled out portion of said filament.
7. The device as set forth in claim 1, further comprising a means to hold said pulled out portion of said filament.
8. The device as set forth in claim 1, further comprising a means to close the opening of said container through which said filament can be pulled out.
9. The device as set forth in claim 1, further comprising a means to pull out said portion of said filament.
10. The device as set forth in claim 1, further comprising a selection means to select parameters of said light treatment.
11. The device as set forth in claim 1, wherein said container comprises two or more light sources each capable of delivering a unique light treatment through said filament, said filament is transparent to the light of each of said two or more light sources, and further comprising a selection means to select one of said two

or more light sources and said selected light source being optically connectable to said filament.

- 5 12. The device as set forth in claim 1, wherein said light treatment is selected from the group consisting of an anti-inflammatory effect, a preventative effect, an anti-bacterial effect, a sterilizing effect, a heating effect, a caries-protective effect, plaque removing effect, a teeth-whitening effect, a cleaning effect, a cosmetic effect, a therapeutic effect, a healing effect, a bio-stimulative effect, a bio-altering effect, a pain-releaving effect, an agent penetrating effect, a photo-rejuvenating effect, a photo-dynamic treatment effect or a tissue stimulating effect.
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13. The device as set forth in claim 1, wherein said light beam comprises light from the ultraviolet, visible or infrared spectrum.
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14. The device as set forth in claim 1, wherein said light beam can be selected to be applied in a manner selected from the group consisting of a pulsed manner and a continuous manner.
- 20 15. The device as set forth in claim 1, further comprising a toothpick.

16. The device as set forth in claim 15, wherein said toothpick is a transparent toothpick and wherein said transparent toothpick is optically connected to said light source or said transparent toothpick is optically connected to a different light source.

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17. A device for light treatment at a body structure, comprising:

(a) a container, wherein said container comprises a light source capable of delivering a light beam, wherein said light beam provides said light treatment;

(b) a flexible waveguide optically connected to said light source and stored in said container, wherein said flexible waveguide comprises openings to allow radiation of said light beam, and wherein a portion of said flexible waveguide can be pulled out from said container; and

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(c) a means to turn on said light source after which said light beam radiates through said openings of said pulled out portion of said flexible waveguide at said body structure.

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18. A method to optically apply a light treatment at a body structure, comprising the steps of:

(a) optically connecting a filament to a light source capable of delivering a light beam, wherein said filament is a strand or fiber of a material transparent to said light beam;

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(b) pulling out a portion of said filament from a container that hosts said filament;

- (c) placing said pulled out portion of said filament near or against said body structure; and
- (d) turning on said light source after which said light beam radiates through said pulled out portion of said filament at said body structure.

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19. The method as set forth in claim 18, further comprising the step of cutting said pulled out portion of said filament.

20. The method as set forth in claim 18, further comprising the step of holding said pulled out portion of said filament with a holding means.

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21. The method as set forth in claim 18, further comprising the step of closing the opening of said container through which said filament can be pulled out.

22. The method as set forth in claim 18, further comprising the step of pulling out said portion of said filament with a holding means or a closing means.

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23. The method as set forth in claim 18, further comprising the step of retracting said pulled out portion of said filament back into said container.

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24. The method as set forth in claim 18, further comprising the step of selecting parameters of said light treatment.

25. The method as set forth in claim 18, further comprising the step of providing two or more light sources each capable of delivering a unique light treatment through said filament, said filament is transparent to the light of each of said two or more light sources, and further comprising the step of selecting one of said two or more light sources and optically connecting said selected light source to said filament.

26. The method as set forth in claim 18, wherein said light treatment is selected from the group consisting of an anti-inflammatory effect, a preventative effect, an anti-bacterial effect, a sterilizing effect, a heating effect, a caries-protective effect, plaque removing effect, a teeth-whitening effect, a cleaning effect, a cosmetic effect, a therapeutic effect, a healing effect, a bio-stimulative effect, a bio-altering effect, a pain-releaving effect, an agent penetrating effect, a photo-rejuvenating effect, a photo-dynamic treatment effect or a tissue stimulating effect.

27. The method as set forth in claim 18, wherein said light beam comprises light from the ultraviolet, visible or infrared spectrum.

28. The method as set forth in claim 18, wherein said light beam can be selected to be applied in a manner selected from the group consisting of a pulsed manner and a continuous manner.

5 29. The method as set forth in claim 18, further comprising a toothpick.

30. The method as set forth in claim 29, wherein said toothpick is a transparent toothpick and wherein said transparent toothpick is optically connected to said light source or said transparent toothpick is optically connected to a different light source.

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31. The method as set forth in claim 18, further comprising the step of adding an agent to said body structure.